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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/630,121	08/01/2000	Hao A. Chen	3620-023-01	8367

7590 10/20/2003

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EXAMINER
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WATKINS III, WILLIAM P

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 10/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/630,121

Applicant(s)

CHEN ET AL.

Examiner

William P. Watkins III

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 July 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-21, 31-33 and 37-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-21, 31-33 and 37-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

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### DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7-21, 31-33, 37-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson (U.S. 6,324,809 B1) in view of Nishibori (U.S. 5,869,138) further in view of Andres (U.S. 5,553,427).

Nelson teaches planks, which can be used to make up a floating floor: which can consist of a core layer, which may be PVC; and a decorative overlay, which may be a high pressure laminate (col. 2, line 50 through col. 3, line 45, col. 2, lines 1-5). The examiner notes that many options for the top and bottom layers of the core are taught, but that the core being exposed as the bottom surface, with a decorative laminate as the top surface, is a possible taught option (col. 2, lines 50-61). Nishibori '138 teaches printing a wood grain pattern on a

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background colorant coating on a core with a clear protective top coat, the core is comprised of thermoplastic resin, which is used as a wood board substitute flooring (abstract, Figure 1). Andres teaches the use of hollow cavities in a PVC floor plank as well as the use of feet to raise the plank off the floor (Figure 7). The instant invention claims the use of printing on the core of a PVC plank in a floating floor with the use of hollow cavities and feet on the planks. It would have been obvious to one of ordinary skill in the art to print directly on the plank of Nelson et al. instead of using a printed overlay in order to save the expense of construction of the overlay and provide a realistic wood grain pattern because of the teachings of Nishibori '138 to form a realistic wood grain pattern on a thermoplastic core by direct printing (abstract, Figure 1). It further would have been obvious to use cavities and feet in the planks of Nelson in view of Nishibori '138 in order to lower the weight and amount of material used in the core and to raise the planks off of the subfloor for the purposes of insulation because of the teachings of Andres. Nelson appears both explicitly and implicitly to teach rectangular planks with no type of cupping. The examiner therefore takes the planks of Nelson as modified above to be equivalent to the heat-treated

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planks of the instant claims. The examiner takes the background colorant layer of Nishibori '138 as being part of the final printed pattern since it forms a visible part of the pattern. In the alternate it would have been obvious to delete the colored layer and just print a wood grain pattern if a less realistic appearance is acceptable as a trade off to produce a lower cost final product due to the deletion of a process step.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 31, 47, 51 and 53 are rejected under 35 U.S.C. 102(a and e) as being anticipated by Nishibori (U.S. 5,869,138).

The reference teaches a plank made of a thermoplastic resin with a printed pattern on the core and a top coat on the printed

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pattern (abstract, Figure 6). The examiner takes the colorant coating as being part of the printed pattern design since the color forms a visible part of the wood grain pattern and therefore the printed pattern design is taken as being on the top surface of the core. Nishibori '138 appears both explicitly and implicitly to teach boards with no type of cupping. The examiner therefore takes the boards of Nishibori '138 to be equivalent to the heat treated planks of the instant claims. No backing layer is taught on the bottom of the core of Nishibori '138.

5. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishibori (U.S. 5,869,138) in view of Nishibori (U.S. 4,610,900).

Nishibori '138 teaches a printed pattern on a thermoplastic core as noted above. Nishibori '900 teaches thermal treatment of a thermoplastic core after molding in order to resist deformation of the core over time (abstract). The instant invention claims heat-treating of a thermoplastic core with a printed pattern. It would have been obvious to one of ordinary skill in the art to heat treat the board of Nishibori '138 in order to reduce deformation over time because of the motivation

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of the teachings of Nishibori '900 to heat treat thermoplastic boards to reduce deformation.

6. Applicant's arguments filed 29 July 2003 have been fully considered but they are not persuasive.

Regarding the rejections that use Nishibori '138, applicant argues that the reference teaches a synthetic wood particle board instead of the instant claimed thermoplastic plank and that printing on a synthetic wood board would therefore not be transferred by one of ordinary skill in the art to a thermoplastic plank in the rejection with Nelson '809 and is not an anticipation in the 102 rejection. The examiner gives this argument little weight as a close examination of the reference and the instant specification indicated that both use similar materials. Nishibori '138 may be up to 80 percent thermoplastic with only 20% cellulose material. The instant specification discloses the use of fillers including wood flours and cellulosic powders at up to 30% by weight of the final thermoplastic product (page 7, lines 20-25, page 10. lines 5-15 and page 8, lines 20-25). The examiner sees little difference between a synthetic wood board made mostly of thermoplastic with a minor amount of wood filler and a thermoplastic plank or board

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made mostly of thermoplastic with a minor amount of wood filler. Even if a larger than 80% amount of thermoplastic is used, Nishibori '138 merely teaches that the printed appearance will not be good (col. 8, lines 45-55), not that the composite cannot be printed. Nishibori '900 teaches a similar thermoplastic product (col. 2, lines 35-50).

Regarding the combination with Nelson '809 applicant argues, as before, that the reference requires bottom and top laminate layers. For the reasons of record the examiner maintains the position that col. 2, lines 50-65 of the reference teaches that the top and bottom surfaces of the laminate can be selected from the exposed surfaces of the core or from decorative laminate layers. Nelson can be installed without glue, which allows a floating floor installation. Applicant argues that Andres is to fixed to a subfloor. The examiner relies on the reference for the teaching of feet and cavities to lighten the weight of the plank and Nelson for the method of joining planks to each other and for mounting the structure on the subfloor. Applicant also argues that the absence of heat treating implies cupping in Nelson and Nishibori '138 to one of ordinary skill in the art. There is no evidence of record that this is the case, other than attorney argument. Absent



evidence, the examiner assumes there is no cupping in the cited references.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Watkins III whose telephone number is 703-308-2420. The examiner works an increased flex time schedule, but can normally be reached Monday through Friday, 11:30 A.M. through 8:00 P.M. Eastern Time. The examiner returns all calls within one business day unless an extended absence is noted on his voice mail greeting.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 703-308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

WW/ww  
October 16, 2003

A handwritten signature in black ink, reading "William P. Watkins III". The signature is written in a cursive style with a large, stylized "W" and "I".

**WILLIAM P. WATKINS III  
PRIMARY EXAMINER**